This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A method of establishing optical communication, said method comprising the steps of:

providing an integrated optical waveguide circuit component having, an optical processing area, N input and output waveguide ports and at least one waveguide structure, the at least one waveguide structure going around the optical processing area;

providing an optical fiber array having an array of M optical fibers, said optical fibers each having a coupling end for optical coupling to at least a portion of the input and output waveguides of said integrated optical waveguide circuit component, wherein at least a portion of said optical fibers terminate with an individual optical fiber terminal end;

positioning said optical fiber array adjacent to said integrated optical waveguide circuit component so that a plurality of photons emitted from the coupling end of at least one of the optical fibers are coupled into the at least one waveguide structure of said integrated optical waveguide circuit component and coupled back into the coupling end of at least one of the optical fibers of the optical fiber

array adjacent to said integrated optical waveguide circuit component;

adjusting the relevant position of said optical fiber array to said integrated optical waveguide circuit component so that a sensed value representative of the total optical power of the photons coupled back into the coupling end of the at least one optical fiber is maximized; and

securing said position of said optical fiber array to said integrated optical waveguide circuit component.

2. (Original) The method of claim 1, wherein providing an optical fiber array further comprises providing an optical fiber array held in an optical fiber array holder, wherein said coupling ends of the optical fibers are contained by said optical fiber array holder.

3. (Previously Presented) The method of claim 1, wherein said optical fiber array is comprised of an optical fiber array ribbon.

4. (Original) The method of claim 3, wherein said optical fiber terminal ends are contained by said optical fiber array ribbon.

5. (Previously Presented) The method of claim 1, wherein securing said position of said optical fiber array to said circuit component comprises adhering said optical fiber array holder to said circuit component so as to maintain the maximized sensed value.

6. (Original) The method of claim 1, wherein M and N are at least two.

7. (Previously Presented) The method of claim 1, wherein said integrated optical waveguide circuit component comprises a planar substrate.

8. (Previously Presented) The method of claim 1, wherein said integrated optical waveguide circuit component comprises optical wavelength processing devices.

9. (Previously Presented) The method of claim 1, wherein adjusting the relevant position comprises adjusting the relevant position in at least one of a first translation direction, a second translation direction, and a rotation direction.

10. (Original) The method of claim 1, wherein the relevant position of said optical fiber array to said circuit component is adjusted with an auto-alignment system.

11. (Previously Presented) The method of claim 10, wherein said sensed value representative of the total optical power is inputted into said auto-alignment system.

12. (Previously Presented) The method of claim 11, wherein said auto-alignment system adjusts the relevant position of said optical fiber array to said circuit component in at least at least one of a first translation direction, a second translation direction and a rotation direction based on the sensed value representative of the total optical power that is inputted in the auto-alignment system.

13. (Previously Presented) A method of establishing optical communication, comprising the steps:

providing an integrated optical waveguide circuit component having a first side, an optical processing area, N waveguide ports located on the first side, and at least one waveguide structure, the at least one waveguide structure having an input and an output located on the first side, with the input positioned near an end of the first side, and the output positioned near an opposite end of the first side;

providing an optical fiber array having an array of M optical fibers, said optical fibers each having a coupling end for optical coupling to at

least a portion of the waveguides of said integrated optical waveguide circuit component;

positioning said optical fiber array adjacent to said integrated optical waveguide circuit component so that a plurality of photons emitted from the coupling end of at least one of the optical fibers are coupled into the at least one waveguide structure of said integrated optical waveguide circuit component and coupled back into the coupling end of at least one of the optical fibers of the optical fiber array adjacent to said integrated optical waveguide circuit component;

adjusting the relevant position of said optical fiber array to said integrated optical waveguide circuit component so that a sensed value representative of the total optical power of the photons coupled back into the coupling end of the at least one optical fiber is maximized.

14. (Previously Presented) The method of claim 13, wherein providing an optical fiber array further comprises providing an optical fiber array held in an optical fiber array holder, wherein said coupling ends of the optical fibers are contained by said optical fiber array holder.

15. (Previously Presented) The method of claim 13, wherein said optical fiber

array is comprised of an optical fiber array ribbon.

16. (Previously Presented) The method of claim 13, wherein securing said position of said optical fiber array to said circuit component comprises adhering said optical fiber array holder to said circuit component so as to maintain the maximized sensed value.

17. (Previously Presented) The method of claim 13, wherein said integrated optical waveguide circuit component comprises optical wavelength processing devices.

18. (Previously Presented) The method of claim 13, wherein adjusting the relevant position comprises adjusting the relevant position in at least one of a first translation direction, a second translation direction, and a rotation direction.

19. (Previously Presented) The method of claim 13, wherein the relevant position of said optical fiber array to said circuit component is adjusted with an auto-alignment system.

20. (Previously Presented) The method of claim 19, wherein said sensed value representative of the total optical power is inputted into said auto-

alignment system.

21. (Previously Presented) A method of establishing optical communication, comprising the steps of:

providing an integrated optical waveguide circuit component having a first side, N waveguide ports located on the first side, and at least one waveguide structure, the at least one waveguide structure having an input and an output located on the first side with at least one of the waveguide ports between the input and the output of the waveguide structure;

providing an optical fiber array having an array of M optical fibers, said optical fibers each having a coupling end for optical coupling to at least a portion of the waveguides of said integrated optical waveguide circuit component;

positioning said optical fiber array adjacent to said integrated optical waveguide circuit component so that a plurality of photons emitted from the coupling end of at least one of the optical fibers are coupled into the at least one waveguide structure of said integrated optical waveguide circuit component and coupled back into the coupling end of at least one of the optical fibers of the optical fiber array adjacent to said integrated optical waveguide circuit

component;

adjusting the relevant position of said optical fiber array to said integrated optical waveguide circuit component so that a sensed value representative of the total optical power of the photons coupled back into the coupling end of the at least one optical fiber is maximized.